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CIRCULAR OF INFORMATION

OF THE

BAYONNE VOCATIONAL SCHOOL

BAYONNE, N. J.

1919

CIRCULAR OF INFORMATION

OF THE

BAYONNE VOCATIONAL SCHOOL

Board of education

BAYONNE, N. J.

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INSTRUCTORS

MERRITT W. HAYNES, A.B. *Principal*

Six years' experience at pattern making. Graduate of University of Rochester 1905. Instructor in joinery, wood turning and pattern making, Mechanics' Institute, Rochester, N. Y., 1909-1911. Principal of Bayonne Vocational School since 1911.

CLEVELAND AUSTIN *Woodworking and Drawing*

Twelve years' experience at carpentry and mill work. Summer course in Teachers' College, 1915. Teacher in Vocational School since 1914.

DANIEL J. BONNER *Machine Shop Practice*

Twenty years' experience as a machinist. Student in Freeland, Pa., Mechanical School. Teacher in Bayonne Vocational School since April, 1918.

JOHN F. CORR *Machine Shop Practice*

Thirty-three years' experience as a machinist, tool maker and model maker. Teacher in Vocational School since 1911.

MILDRED L. GANNON *Academic Subjects*

Graduate of Bayonne Teachers' Training Class. Nine years' experience teaching in elementary schools. Teacher in Bayonne Vocational School since 1913.

MARY A. HALEY *Academic Subjects*

Graduate of Potsdam, N. Y., State Normal School. Fifteen years' experience teaching in elementary schools. Teacher in Bayonne Vocational since 1913.

JOHN W. MURRAY *Electric Wiring*

Twenty-eight years' experience as an electrician in Bayonne plant of Standard Oil Company. Graduate of New York Electrical Trade School. Teacher in Vocational School since 1913.

MARY D. REILLY *Academic Subjects*

Graduate of Trenton Normal School. Fifteen years' experience teaching in elementary schools. Teacher in Vocational School since 1916.

MARY O'HARE *Academic Subjects*

Graduate of Trenton Normal School. Ten years' experience teaching in elementary schools. Teacher in Vocational School since 1916.

FRANK R. WARD, B. S. *Mechanical Drawing*

Graduate from Maryland State College, 1910. Student in Pedagogy in Carnegie Institute, 1915-17. Ten years' experience as instructor in mathematics and mechanical drawing.

GENERAL DESCRIPTION OF THE BAYONNE VOCATIONAL SCHOOL

ORGANIZATION

This school was opened in September, 1911, by the Board of Education of the City of Bayonne. It is in every respect a public school, and is approved by the State Commissioner of Vocational Education.

PURPOSE

The aim of the school is to train boys to enter the industries of the community with some definite preparation for earning a living. The school is not a trade school in the sense that it will turn out journeymen mechanics. It is intended rather to find out what trade a boy is best fitted to follow, and then to give him such a foundation as will fit him to enter the trade as a superior apprentice.

COURSES AND EQUIPMENT

1. ***Machine Shop Practice.*** $30,000 worth of first-class tools and machinery, including 25 Reed Engine Lathes, 1 Whitcomb Planer, 2 Gould & Eberhardt Shapers, 2 Brown & Sharpe Universal Milling machines, 1 Brown & Sharpe No. 1 Universal Grinder, 1 Brown & Sharpe Flat Surface Grinder, Drill Presses, Gas Forges, and other auxiliary tools and equipment.

Capacity for forty pupils at a time.

2. ***Woodworking.*** Including carpentry, cabinet making and pattern making. $2,100 worth of first-class tools and machinery, including 20 cabinet benches with complete outfit of individual tools, 1 Oliver Universal Saw, one American 36-inch Band Saw, one American 12-inch Jointer, 1 American 24-inch Surfacing Planer, 8 Wood-turning Lathes.

Capacity for twenty pupils at a time.

3. ***Electric Wiring.*** $2,500 worth of tools and standard fixtures, including one 5 KW Motor Generator, with switchboard, several motors, dynamos, etc., for experimental use.

Capacity for twenty pupils at a time.

4. ***Mechanical Drawing.*** 24 cabinet drawing tables, each equipped with T-squares, triangles, scales and drafting instruments.

Capacity for twenty-four pupils at a time.

ENTRANCE REQUIREMENTS

Boys must be 14 years old and have reached at least the 7A grade in the Elementary Schools, to be eligible to enter the Vocational School. No deviation from this rule will be allowed except with the written approval of the Superintendent of Schools.

ELEMENTARY SCHOOL GRADUATES

Applicants are advised to complete the eighth year in the elementary schools if possible before entering the Vocational School. Special academic classes in mathematics, English and science are organized for elementary school graduates.

BEGINNING COURSES

Classes in the beginning courses are kept together for academic work as well as for shop work. In this way the academic teachers can more definitely relate their work to the shop work.

Pupils may change from one shop to another at the beginning of any ten weeks' term.

LENGTH OF COURSES

Courses are outlined for three years' work, but any course may be completed in shorter time, provided a pupil:

(a) Does outside work during vacation.

(b) Enters with advanced academic standing.

THE SCHOOL YEAR

The school year is identical with that of the other public schools of the city, beginning with the Tuesday after Labor Day and continuing until June 29, with the usual holidays. The forty weeks of the year are divided into four terms of ten weeks each.

SCHOOL HOURS AND CLASS PERIODS

The school day is divided into eight periods of forty-five minutes each. Each pupil is required to take 20 periods a week of academic work and to devote one entire session (3 hours) daily to shop work.

See page 22 for table showing time allowance for academic work in Vocational School compared with the elementary schools.

CREDITS FOR SHOP WORK

A unit in shop work represents the equivalent of five periods of three hours each per week for ten weeks, or 150 hours

in the school shop. Pupils who have earned six or more credits in any one school shop may receive two additional credits for outside work or job work. The credit for job work will be given for 150 hours of practical work in the school shop. The unit for outside credits is 300 hours of service under a competent foreman, at work of such a character that it will receive the approval of the principal and instructor in the same branch in the school.

Not more than two outside credits or job work credits will be given to any pupil.

Shop credits may be earned in the evening upon the same basis as in the day school, except that no job work credits are given.

CREDITS FOR ACADEMIC WORK

A unit in academic work or drawing represents approximately five periods of forty-five minutes per week for ten weeks.

Credits for academic work will be given to pupils coming from the seventh grade or higher, in proportion to their academic grading. Academic credits will be given for satisfactory work done in summer schools or evening school, as well as for work done in the day school.

Credit certificates for both shop and academic work will be given to pupils upon the completion of any unit outlined, so that pupils may always have credentials for work already completed.

Although the units outlined are each based approximately upon a given amount of time, they also represent definite accomplishment of the topics indicated. (See list of units). While the average pupil may earn a shop credit in 150 hours, an exceptional pupil might complete the same unit in 100 hours, or a slower pupil might require 200 or more hours to accomplish the same set of exercises.

The sequence of units is not rigid. For example, a pupil might earn the credit certificate for cabinet work, without having taken wood turning. The sequence of topics followed and credited beyond the first two or three in each department is largely an individual matter. For graduation, however, all the prescribed units must have been passed. This makes it possible for pupils to graduate by earning some credits in private study, in evening or summer schools, or in outside shop work.

PROMOTIONS

The flexible arrangement of this unit system does away with the promotion of whole classes by grades. Each pupil is treated individually, and the change of classes every ten weeks is based upon the election of subjects rather than a class grading.

GRADUATION

The requirement for graduation from the courses in Machine Shop Practice, Carpentry, Cabinet Making, Pattern Making or Electric Wiring is as follows:

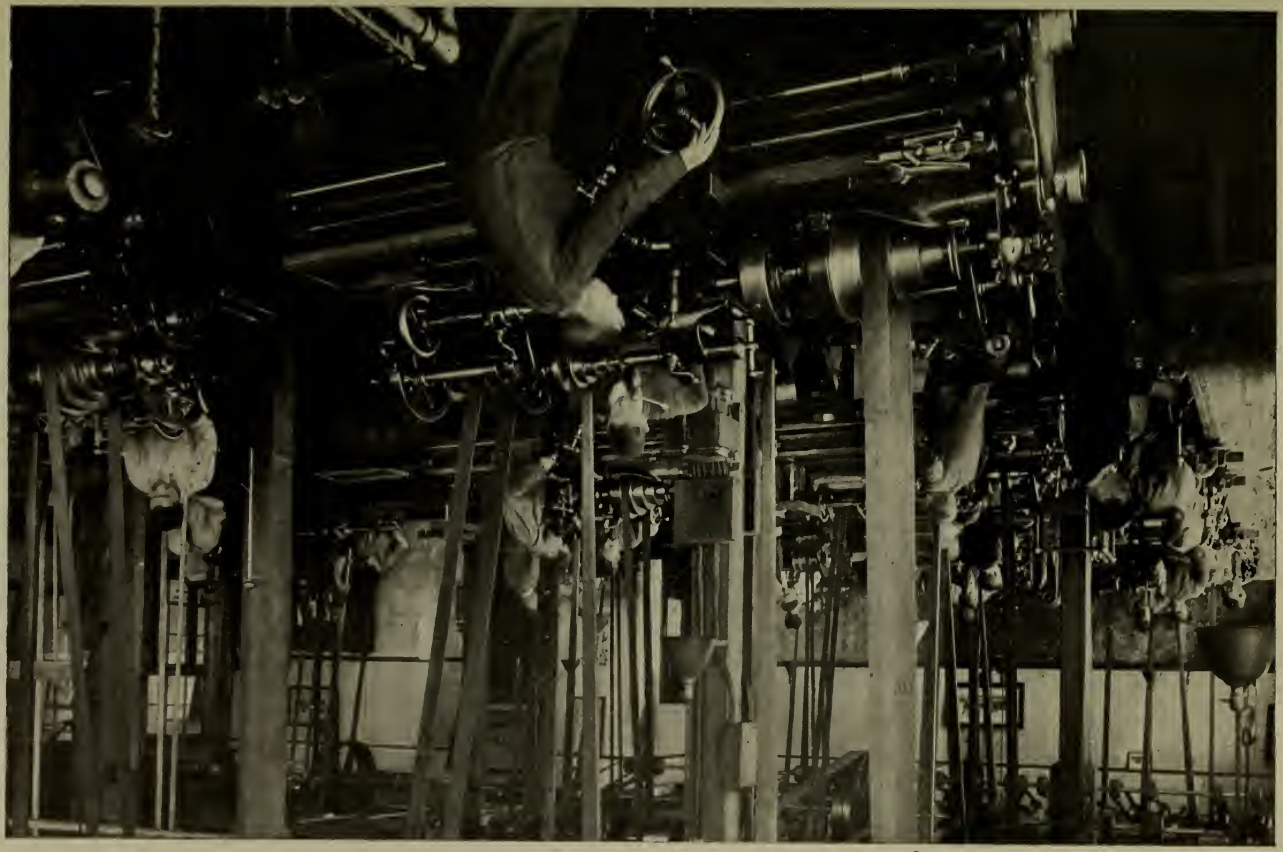
Shopwork in the department specified	10	credits
Drawing	4	"
Academic Work	24	"

For graduation from the course in either mechanical or architectural drawing:

Drawing	12	credits
Shop work in at least two shops	4	"
Academic Work	24	"

DESCRIPTION OF UNITS

In the list of units of the various courses given below there is specified for each unit the particular standards to which the student must conform in order to receive credit for the unit. ***These standards do not represent course of study or teaching methods.*** It matters not what jobs the student does, his operations on each job are checked up and the time credited to the proper items under the various units. For example, a boy is given a job of finishing a casting for an eight-inch face plate. An analysis of the job shows that the necessary operations are scheduled as items (1), (2), (3), (4) and (5) under unit 5, "Chucking and Boring." The time which the student spends on each operation is accordingly recorded. In doing other jobs involving these same operations the time is also recorded until the student can perform each operation independently and within reasonable time. In many cases the operations on a given job may belong under several different units. But when the student can satisfactorily perform all the operations or items specified under any one unit, he deserves the credit certificate for that unit regardless of the total time spent on these operations, or of the portions of other units completed.



UNITS IN MACHINE SHOP COURSE

1. **Elementary Metal Work.**
   - (a) Sheet Metal Work—Exercises in laying out, cutting, forming and riveting of simple objects such as rectangular boxes and vise lining.
   - (b) Filing—exercises in laying-out, drilling out and filing of objects in thin steel such as flat wrenches and calipers.
   - (c) Bench Lathe Practice—turning of rivets and washers for calipers and screws for parallel clamps.
   - (d) Thread cutting with taps and dies—applied in making parallel clamps, etc.

2A **Cylinder Turning.** (half credit)
   - (1) Center piece of round stock correctly.
   - (2) Face piece of round stock to exact length.
   - (3) Align lathe centers accurately.
   - (4) Turn stock to a given diameter, using micrometer measurement (allowance .001 inch).
   - (5) Cut square shoulder on piece of round stock.
   - (6) Grind tools for all above mentioned operations.

2B **Taper Turning.** (half credit)

   Turn piece of stock to fit perfectly in standard taper gauge, using either method: (a) setting over tail stock, (b) compound rest, or (c) taper attachment.

3.—**Thread Cutting.**
   - (1) Cut standard V threads to fit a given nut accurately. All threads to have smooth finish.
   - (2) Cut square thread of a given pitch.
   - (3) Cut a multiple thread of a given pitch and number.
   - (4) Grind tools for all threads.
   - (5) Calculate and set gears for any given thread.
   - (6) Memorize number of threads per inch for any standard screw from 1-4 inch to 1 inch.

4. **Chucking and Boring.**
   - (1) Fasten a piece of finished stock in chuck to run true.
   - (2) Face and center a piece of stock held in lathe chucks.
   - (3) Drill a piece of solid stock held in chuck.
   - (4) Bore stock to a given diameter (allowance .001 inch).
   - (5) Cut an inside thread to fit a given gauge.
   - (6) Bore tapered hole to fit given gauge.

5. **Eccentric Turning.**
   - (1) Lay out work for given throw.
   - (2) Turn work between centers to given dimensions.
   - (3) Mount work on face plate and turn to given dimensions.
   - (4) Use cat head or thimble with steady rest.

6. **Planer and Shaper.**

   Mounting stock and working to given dimensions, in either

bed planing or chuck planing, on both horizontal, vertical or oblique surfaces.

7. **Milling Machine.**
   (1) Milling flat surface to given dimensions (allowance .001 inch).
   (2) Slot milling.
   (3) Boring.
   (4) Use of dividing head for milling square and hexagon heads.
   (5) Use of dividing head for fluting reamers and taps.
   (6) Use of dividing head for cutting spur gears.
   (7) Use of dividing head for cutting spirals.

8. **Grinding.**
   (1) Use of cylindrical grinder for straight and tapered work (external) to required dimensions (allowance .001 inch).
   (2) Use of flat surface grinder to required dimensions (allowance .001 inch).
   (3) Use of cutter grinder for grinding milling cutters, both straight and spiral, end mills, reamers and gear cutters.

9. **Tool Making.**
   (1) Making reamers, end mills, spiral milling cutters, taps, etc., involving use of engine lathe, milling machine and grinder.
   (2) Also forging and tampering of tools.

10. **Bench and Floor Work.**
   (1) Problems in laying out work.
   (2) Drilling and tapping.
   (3) Chipping key ways, oil grooves, etc.
   (4) Filing and fitting.
   (5) Assembly and erecting.

11 & 12. **Job Work.**
   For each 150 hours of practical machine shop work in the school shop, or 300 hours in an outside shop under a competent foreman, an additional credit may be given.

UNITS IN ELECTRICAL COURSE

1A **Elementary Electricity.** (half credit)

Ten problems involving the elementary principles of electricity. Upon completing this unit, the student should be able to install the ordinary front door bell system of a private house.

1B **Bell Wiring.** (half credit)

Eight problems representing the installation of complicated bell systems such as return signals using two to ten bells in both series and parallel wiring.

2A **Annunciators.** (half credit)

Eight problems representing installations of different kinds

of annunciators with both single wire and cable conductors. The standard for this unit also includes splicing and soldering of connections and tracing the direction of the current through the circuit.

2B **Electric Door Openers.** (half credit)

Six problems representing typical installations of door openers for private houses and large apartments.

3A **Fire and Burglar Alarms.** (half credit)

Five problems representing installation of fire and burglar alarm systems, using instruments actually needed for this type of work.

3B **Electric Gas Lighting.** (half credit)

Three problems involving the installation of electric gas lighting systems and use of the spark coil.

4. **Telephones.**

Four problems in the installation of inter-communicating telephone systems.

5. **Electric Light Wiring.**

Twenty problems representing best modern practice in wiring for electric lights with both series and parallel systems, and including calculation of volts, amperes, watts and resistance, also proper sizes of ware for any installation.

6. **Electric Motors.**

Eighteen problems in connecting up both A. C. and D. C. motors of standard types, with necessary starting boxes, reversing switches and compensators.

7. **Armature Winding.**

Eight problems in winding armatures, both series and parallel, from formulas.

8. **Generators and Meters.**

Eight problems in connecting up both A. C. and D. C. generators with necessary volt meters, ammeters and watt meters.

9. **Switch Boards.**

Three problems in assembling switch boards with necessary bus bars and instruments, and testing out by connecting to dynamos.

10. **Transformers.**

Four problems involving theory and practice of voltage transformation on single phase, two and three phase transformers and bell ringing transformers.

11. **Specifications and Estimating.**

To receive this credit the student must be able to read and understand architects' drawings for electrical installations, make out lists of material required, using catalog descriptions, and estimate approximate costs of same, using discount sheets in connection with catalog price lists.

12-13. **Job Work.**

For each 150 hours of practical electrical work about the school buildings of the city or otherwise, the student will be given a certfiicate for Job Work. Not more than two such certificates will be given to any student.

UNITS IN WOODWORKING

1. **Elementary Woodworking.**

Credit for this unit will be given when the student demonstrates his ability to use the ordinary bench tools in performing the more common woodworking operations as follows:

(1) Jack plane for surface planing, edge planing, end wood planing and on round surfaces and edges.
(2) Marking gauge for gauging parallel lines.
(3) Try-square for testing square corners and for laying out work.
(4) Back saw for sawing small stock at bench accurately to knife line.
(5) Bench knife for laying out work.
(6) Bit brace, auger bits, Forstner bits, drill bits and countersinks.
(7) Firmer chisels for straight grain and cross grain chiseling, shoulder cuts and paring cuts.
(8) Steel square for testing and laying out work, and for laying out miter box cuts of 90 degrees and 45 degrees.
(9) Rip saw and cross cut saw.
(10) Combination plane for cutting rabbets and grooves.
(11) Clamps and hand screws for holding work and gluing up stock.
(12) Familiarity with sizes and use of nails, brads, wood screws and sand paper.
(13) Ability to write stock list for given job.
(14) Ability to prepare and apply glue.

2. **Care of Woodworking Hand Tools.**

(1) Grind and whet tools or cutters with straight edges.
(2) Sharpen marking gauge spur.
(3) Sharpen auger bits, Forstner bits and drill bits.
(4) Properly file screw driver bit.
(5) Set and joint and file hand saws, both rip and cross cut.
(6) True up grind stone.
(7) Replace broken chisel handle.
(8) Grind and whet a gouge.
(9) Sharpen a scraper blade.

3. **Joinery.**

To receive credit for this unit the student must: (1) make and apply in practical work each of the following joints: square butt, beveled butt, miter, rabbet edge, rabbet end dado and plow, cross lap, middle lap, end lap, half lap dovetail, blind mortise and tenon with plow,

haunched mortise and tenon, dowelled butt, dowelled miter. (2) have practice in laying out and using the rod in connection with work such as panel doors, sash, cabinets, etc., (3) be able to make out bills of stock consisting of finish and cutting sizes, list of hardware and other necessary materials, with cost of same; also amount of labor on the job and its cost.

4. **Advanced Joinery.**

This credit will be given to students who have had practice in the following operations or types of work: lap dovetailing, blind dovetailing, splayed work, stave work, veneering, bending by means of saw kerfing, keying, backing a veneer, laminating.

5. **Specifications and Estimating.**

This consists of writing a detailed account of how the job is to be made, together with bill of material needed (with cost), and estimate of amount and cost of labor. When the job is completed, an accurate account of material and labor must be rendered and compared with original estimate, and discrepancies explained.

6. **Wood Turning.**

(1) Turn a piece of wood between centers to a perfect cylinder within 1-32 inch of given diameter, using gouge and skew chisel for shaving cuts. (Scraping cuts not to be allowed in spindle turning).
(2) Make clean shoulder cuts with skew chisel.
(3) Cut clean tapers and beads with skew chisel.
(4) Cut clean grooves with gouge.
(5) Turn rosette shaped pieces "plankwise" on face plate, using square point, diamond point and round nose chisels.
(6) Turn rosette shaped pieces held in a chuck.
(7) Turn pieces of hollow cylinder shape held on a mandrel.
(8) Finish work in lathe with shellac and oil.

7. **Operation of Woodworking Machinery.**

(1) Use of **circular saw** for ripping, cross cutting, resawing, angular cutting, plowing, dadoing and rabbeting, including necessary adjustments for each operation, also putting on and removing saw from arbor.
(2) Use of **jointer** for surface planing. edge jointing, rabbeting, and beveling edges, including necessary adjustments; also adjustment of front table with line of cylinder.
(3) Use of **surfacing planer** for dressing stock to required thickness; also adjustment of pressure bars.
(4) Use of **band saw** for scroll sawing, ripping, angular sawing and resawing, including necessary adjustments. Also putting on, removing and folding of band saw, alignment of top wheel and adjustment of guide post and guide rollers.

8. **Care of Woodworking Machinery.**
   (1) Set, file and braze a band saw.
   (2) Joint, file and set circular saws, both rip, cross-cut and combination.
   (3) Sharpen dado cutters.
   (4) Grind, whet and adjust jointer knives.
   (5) Grind, whet and adjust planer knives.
   (6) On surfacing planer, set bed and adjust pressure bars.
   (7) Properly oil bearings both with and without oil chambers.
   (8) Lace leather belts, both straight and hinged joints.
   (9) Babbet a journal.

9. **Cabinet Work.**
   This unit covers work on cases and cabinets with particular reference to practice in fitting drawers, fitting doors, fitting hardware, constructing adjustable shelves, fitting mouldings, constructing paneled work, use of lay-out rod, staining and varnishing.

10. **Sash Doors and Trim.**
   (1) Making plain sash, check rail sash, sash closet doors.
   (2) Cross panel doors, wardrobe doors, batten doors, door steps, carpet strips.
   (3) Mitered trim, cabinet head trim, trim with corner blocks, window stools and aprons.

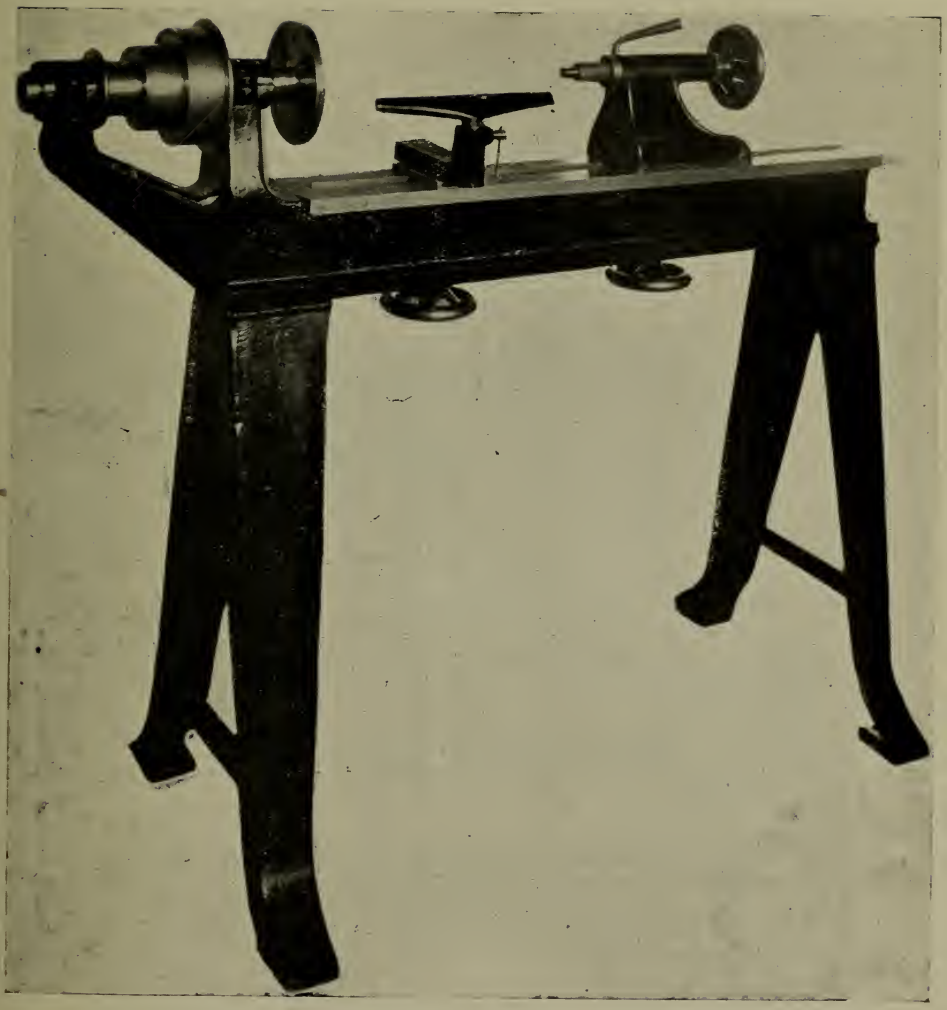
11. **Practical Carpentry.**
   (1) Setting window frames, trimming, fitting sash and fixtures.
   (2) Setting door frames, fitting doors, trimming, fitting fixtures.
   (3) Setting door jambs and trimming.
   (4) Cutting and fitting mouldings (coping and mitering).
   (5) Building and setting porch steps.
   (6) Scribing.

12. **Roof Framing.**
   Practice in laying out and erecting the following kinds of roofs: shed or lean-to, gable, hip, combination gable hip and valley, gambrel.

13, 14 **Job Work.**
   For each 150 hours of practical wood working not credited otherwise, a job work certificate will be granted.

UNITS IN PATTERN MAKING

1. **Solid and Parted Patterns.**
   Includes the following principles or operations: use of shrinkage rule for different metals, making pattern drawings, internal and external draft, rounding corners and edges, use of wood, wax and leather fillets, use of center lines on patterns, use of dowel pins in parted patterns, use of templates for irregular surfaces, thin wood construction, marking patterns, use of different colors of shellac to indicate different metals.



TEN-INCH SPEED LATHE BUILT BY PUPILS

Twelve of these lathes are in use in the various schools of Bayonne

2. **Standard and Irregular Cores.**

Use of core prints for standard cores both vertical and horizontal, green sand cores, making core boxes both half and whole, use of balanced cores, stop-off cores and irregular cores.

3. **Rings and Pulleys.**

Building-up and turning of segment work for rings, with solid webs and with arms.

4. **Pattern Moulding.**

The work of this unit consists of molding the patterns made by the student in at least two of the above units, and making lead castings from the same. This will involve use of two part flask or flat parting, coped out parting, regular and irregular cores.

UNITS IN DRAWING

1. **Simple Working Drawings.**

Ability to draw to full size, half size or quarter size scale single piece objects based upon right prism or right cylinder or combinations of these forms, shown in two or three views properly placed, with correct dimension lines, projection lines and center lines and with lettering neatly done. No inking required for this unit.

2. **Geometrical Drawing.**

Ability to perform the various geometrical constructions commonly used in mechanical drawing.

3. **Surface Development and Intersection.**

Ability to draw in one plane the surface of prisms and cylinders with both right angle and oblique angle intersections.

4. **Screw Threads.**

Draw V, U. S. Standard, Acme and square threads both complete and in conventional form, internal and external.

5. **Machine Details.**

Make working drawings of common machine parts such as cranks, bearings, pulleys, etc., both from models and from assembly drawings. As much opportunity as possible is given in making drawings for jobs under way in the school shops.

6. **Machine Assembly.**

Ability to make assembled drawings of machines with all parts properly classified, and to prepare job and cost lists according to standard drafting room practice.

7. **Cabinet Drawing.**

Working drawings and construction sketches of drawers, doors and other panelled work, and of complete pieces of cabinet work such as tables, benches, wall cabinets, etc.

8. **Architectural Details.**
Drawings of standard mouldings; sash, window and door frames, cornices, arches, columns, etc., for both frame, brick and stone construction.

9. **Architectural Plans and Elevations.**
Complete set of drawings for small building such as cottage or bungalow, with construction details.

10. **Electrical Drawing.**
Drawings of standard electrical symbols, wiring diagrams for bells, annunciators, telephone and lighting systems, and for dynamos and motor installations. Given in connection with work in electrical department.

11. **Orthographic Projection.**
Ability to draw projections in different planes of both right and oblique type.

UNITS IN MATHEMATICS

1. **Review of Fundamental Operations**—20 weeks—
Including whole numbers, fractions, decimals and denominate numbers, with practical applications to shop work.

2. **Simple Mensuration**—10 weeks—
Ability to compute areas of rectangles, triangles, circles prisms and cylinders.

3. **Advanced Mensuration**—10 weeks—
Ability to work and use square root. Ability to compute surfaces and volumes of prisms, cylinders, cones, pyramids and spheres.

4. **Algebra I**—20 weeks
Formulas, Positive and Negative Numbers, Addition, Subtraction, Multiplication, Divison, Symbols of Grouping.

5. **Algebra II**—20 weeks
Simultaneous Equations, Factoring, Addition, Subtraction, Multiplication and Division of Fractions, Fractional Equations, Quadratic Equations, Graphs.

6. **Algebra III**—10 weeks.
Review of preceding courses with practical applications to: a. Similar right triangles. b. Proportion underlying levers. c. Belted pulleys and gears in mesh. d. Formulas applied to screw threads. e. Variation in geometric figures.

7. **Geometry I**—10 weeks.
Fundamental geometrical definitions.
Problems in geometrical construction commonly used in shop work.

8. **Applied Mathematics**—20 weeks.
Including use of slide rules, micrometers, verniers and technical reference books.

9. **Thrift**—20 weeks.
The objective of this unit is the student as a future

wage earner, spender of money, saver of money, owner of property and citizen.

I. Keep a classified account of actual personal cash receipts and cash expenditures.

II. Write correctly each of the following business forms: (1.) Bank check and stub with balance carried forward. (2.) Application for postal money order. (3.) Promissory note. (4.) Application for savings account. (bank or postal.)

III. Produce a pass book showing personal savings account with balance of at least five dollars.

IV. Understand meaning of each of the following terms: Chattel Mortgage, Real Estate Mortgage, Compound Interest, Tax Rate for City, Bonds, Sinking Fund.

UNITS IN ENGLISH, CIVICS AND HISTORY

1. **General Spelling.**

Ability to spell correctly seventy-five per cent. of words in One Hundred Per Cent. Speller.

2. **Technical Spelling.**

Ability to spell seventy-five per cent. of selected list of words relating to the shop work given in the school.

3. **Reading.**

The credit for this topic will be based upon the following points as observed in the oral reading in history, civics, geography and supplementary reading throughout the course: (a) fluency; (b) tone; (c) pronunciation and anunciation; (d) evidence of thought.

4. **Penmanship.**

Ability to write equal to grade seven of the Ayres penmanship scale.

5. **Letter Writing.**

Ability to write acceptably each of the following kinds of letters: Social letters, request for catalog, order for goods, thanking for favor received, reply to advertisement, application for position, telegrams.

6. **Grammar.**

Ability to recognize kinds of sentences, parts of speech, select subject and predicate of sentences, form plural and possessive forms of nouns, write synopsis of commonly used verbs, make correct use of commonly used words having similar meaning (such as learn and teach, affect and effect, lose and loose, sit and set, lie and lay, etc.)

7. **Shop Notes.**

The final writing in ink of the notes given by the shop teachers may be done as a part of the English work under the direction of the academic teachers, and upon completion of the same at the end of the course will be given this credit.

8. **Oral English.**

(a) Ability to give before the class an oral account of process or operation witnessed, or article read in magazine. (b) Deliver before class at least one memorized selection.

9. **Debates.**

Ability to present before class or assembled school direct argument and refute opponent's argument on topics of current interest.

10. **Civics.**

Credit for this topic will be given to pupils who have done one full year's work in prescribed reading and class discussion of current events.

11. **Industrial History.**

To receive credit for this topic the pupil will demonstrate that he knows the date, story and important results of certain important events, including: invention of steam engine, cotton gin, steam boat, locomotive, telegraph, sewing machine, electric light, telephone, electric railway, internal combustion engine, automobile, aeroplane, typewriter, harvesting machinery. Also development of great industries, such as Standard Oil Co., U. S. Steel Corporation, Armour, Swift and other meat packing concerns.

UNITS IN SCIENCE

1. **Personal Hygiene.** 40 minutes per week throughout seventh year.

Instruction in this subject is intended to develop on the part of the pupil correct habits of living, such as care of teeth, bathing, sleeping with open dindows, regular exercise, proper selection of food, sanitation of the house, danger of stimulants and narcotics, etc.

2. **General Science.** A—20 weeks.

Class room instruction following outline of science course for elementary schools for 8A grade.

3. **General Science.** B—20 weeks.

Continuation of preceding unit, following outline for 8B grade, with special emphasis on mechanics.

TIME ALLOWANCE FOR ACADEMIC WORK IN VOCATIONAL AND ELEMENTARY SCHOOLS

Fignures indicate number of minutes per week.

Subject	Grade 7A		Grade 7B		Grade 8A		Grade 8B		Grade 9A		Grade 9B	
	Voc.	Elem.	Voc.	Elem.	Voc.	Elem.	Voc.	Elem.	Voc.	Elem.	Voc.	Elem.
Arithmetic ...	200	200	200	200	...	...	...	...	...	...	...	...
Algebra	...	...	...	...	160	120	200	120	200	200	...	...
Geometry	...	...	...	...	...	...	...	...	...	...	200	...
Science	...	...	...	...	120	120	120	120	120	200	120	200
Drawing	300	80	300	80	160	80	160	80	160	160	160	160
Shop	720	160	720	160	900	160	900	160	900	160	900	160
English	300	400	300	400	160	400	200	400	120	400	120	400
Thrift	...	...	...	...	120	...	...	...	...	...	...	...
Bookkeeping .	...	...	...	...	...	120	...	120	...	120	...	120

WORK OF THE EVENING SCHOOL

The same equipment and corps of teachers of the day school is used for the evening school which opens the first week in October and runs four evenings a week for a minimum term of sixty-four nights.

The Purpose of the Evening School is to help wage earners in skilled trades to increase their skill by technical instruction which will be related as closely as possible to the needs of their daily work.

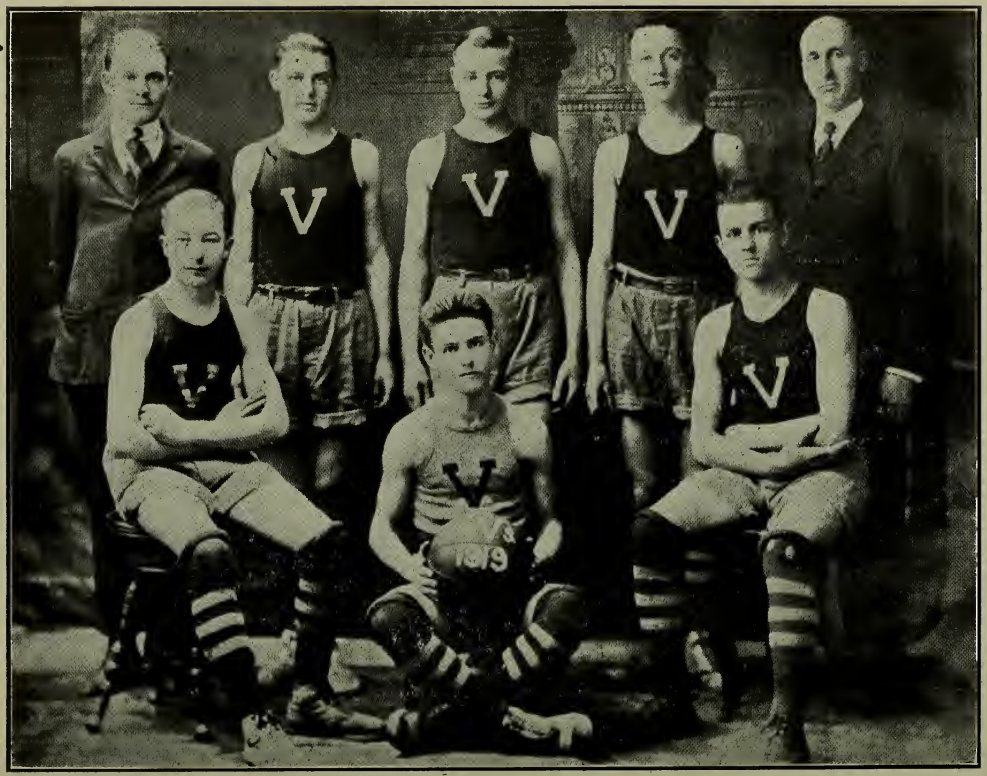
Any Applicant Will Be Admitted provided he is:

1. Sixteen years old or over.
2. Engaged during the day time at work for which the instruction will be an immediate benefit.
3. Able to speak and write English and to perform the fundamental operations in arithmetic, including common and decimal fractions.

Precedence is Given to applicants who come with their employers recommendation.

Technical Study is Provided. Since a knowledge of mathematics and drawing is essential for the intelligent mechanic, all pupils enrolling for shop courses may take two evenings a week of drawing and mathematics, and two evenings of shop work.

Short-Unit Courses. All instruction is conducted on the short-unit plan. Pupils register for definite units and complete the unit elected before beginning another unit. Credit certificates are given for each unit completed.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1919

COMMISSION GOVERNMENT CONSTITUTION OF BAYONNE VOCATIONAL SCHOOL

Adopted May 4, 1915.
Revised April, 1919.

PREAMBLE

We, the pupils of the Bayonne Vocational School, in order to bring about a better system of pupil government, thereby to acquire knowledge and practice in the conduct of pupil affairs so that we may become intelligent voters and citizens of the State, do hereby adopt this Commission Form of Government for conducting the pupil activities of the school.

ARTICLE I

Qualification of Commissioners

1. All student affairs of this school shall be conducted by a commission of five members who shall be nominated and elected, and perform the duties as hereinafter prescribed.

2. No person shall be eligible for the office of Commissioner who has not been a pupil of this school for at least one year.

ARTICLE II

Election and Term of Office of Commissioners.

1. **Nomination.** Candidates for the office of Commissioner shall be nominated by petitions signed by at least ten pupils. No pupil shall sign more petitions than there are offices to be filled. Nominating petitions shall be filed with the princpal at least two days before election. Any teacher may veto any nomination. No name of any nominee shall be printed on the ballot unless said nominee promises to accept the office if elected.

2. **Election.** All commissioners shall be elected by ballot. The names of candidates shall be printed on the ballot in alphabetical order. The voter will mark a cross opposite the names for which he wishes to vote. If more names are marked on any ballot than there are offices to be filled, or if the mark is made in any other manner than as above prescribed, the ballot shall be rejected by the clerks of the election.

3. **Term of Office.** The term of office for commissioners shall be for one-half a school year. Election shall be held during the second school week in September and the last school week of January and the elected commissioners shall take office immediately. During the last school week in January and June, each commissioner shall render a final written report of the work of his department.

4. **Recall of Commissioners.** A vote upon the recall of any commissioners before the expiration of his term may be held by the presentation to the principal of a petition signed by at least one-fourth of the pupils of the school. In case such a recall is carried by a majority vote, an election shall be held within one week to fill the vacancy. Any commissioner recalled shall be ineligible for subsequent election as a commissioner.

5. **Vacancies.** Whenever a vacancy shall occur, due to any commissioner leaving school, resigning, or for any other reason, the

commissioners shall immediately call a new election for the purpose of filling the vacancy for the remainder of the term of office.

ARTICLE III

Duties of Commissioners

The five commissioners shall have charge, respectively, of the following departments, which they shall assign among themselves at their first meeting after being elected.

1. **The Director of Publicity** shall act as chairman of the commission, shall have the title of Mayor and shall preside at all meetings of the commission. He shall act as chairman ex-officio of all pupil committees serving at the public functions of the school, such as exhibitions, commencement, etc.

2. **The Director of Finance** shall have charge of all funds raised for the various student affairs of the school. He shall audit all bills presented to the Commission, and shall recommend for payment such bills as he approves. He shall keep on file all bills paid, which shall be duly receipted. He shall keep an accurate account of all receipts and expenditures, and shall make a report of the same at each regular meeting. He shall pay out no money except duly approved by a majority vote of the Commission.

3. **The Director of Athletics** shall act as manager of all athletic teams and have charge of all athletic affirs of the school. He shall act as the student representative of the school in the Public School Athletic League.

4. **The Director of Conduct and Deportment** shall have supervision of the conduct of pupils as far as such conduct affects the reputation of the school, such as tardiness, truancy, etc., which are shown in the monthly attendance reports, or behavior of pupils in the halls, yard or streets adjacent to the school. He shall make recommendations for regulating such conduct and for disciplining pupils who fail to conform to these regulations.

5. **The Director of Building and Grounds** shall recommend ways and means for the co-operation of pupils in keeping the school property in the most orderly and tidy condition. He shall also make recommendations concerning safety devices in connection with the various machines in the shops, and concerning anything that will add to the comfort and convenience of either pupils or teachers.

6. **Assistants to Commissioners.** The Commission may appoint from the student body or faculty such assistants and committees as they see fit for conducting the work of the various departments, such as a secretary to the Commission, captains and players on the various athletic teams, departmental editors of the school paper, etc.

ARTICLE IV

Meetings

1. The Commission shall meet regularly at 8.45 o'clock on the last school day of each week, and at any other time at the call of the Mayor. All meetings shall be held in the assembly room and in the presence of the assembled school. No motion or resolution shall be voted on by the Commission without first giving an opportunity for public discussion of the same by pupils or teachers.

2. The order of the meeting shall be as follows:

1. Call to order by chairman, and roll call of commissioners.
2. Reading of minutes of last meeting.
3. Reading of Communications and Petitions.
4. Reports of Commissioners.
5. Recommendations of Commissioners.
6. Unfinished business.
7. New business.
8. Adjournment.

3. In the event of the absence of any commissioner from a meeting, he shall at the next assembly which he attends, present to the school a written explanation of his absence.

ARTICLE IV

Referendum Votes

The Commission may at its discretion submit any question which may arise to the whole student body for action.

COMMISSIONERS FOR SECOND TERM OF 1918-9

JOHN SACILOWSKI..... *Mayor*
JOHN RUSHNAK.....*Director of Finance*
PHILIP BLUM..... *Director of Athletics*
CLEMENT GOODLIFFE..... *Director of Conduct and Deportment*
ANDREW DZAMBA.....*Director of Buildings and Grounds*
CHARLES BRANDNER..... *Secretary to the Commission*

Records of Graduates

CLASS OF 1913.

NAME	OCCUPATION	EMPLOYER
Harry Bowers, *261 Prospect Ave.	No reply	
Raymond Hagen, *30a Willow St.	No reply	
William Kunze, *45 E. 43rd St.	No reply	
George Mellindick, 161 W. 24th St.	Top Sergeant, Q. M. C., U. S. A.	
Andrew Miclus, 45 E. 23rd St.	111 M. G. B. A. E. F., France	
John J. Nolan, 95 W. 11th St.	Aviation machinist U. S. N.	
Robert J. Talbot, Jr., 611 Ave. C.	Engineer, U. S. Navy	

* Last known address.

CLASS OF 1914.

Leon Barkowski, *169 Prospect Ave.,	113th T. C., A. E. F., France	
William Bruns, 61 W. 6th St.	Machinist Foreman	Am. Radiator Co., Bayonne.
John A. Chervenak, 25 E. 26th St.	Machinist	Standard Oil Co., Bayonne.
Louis Chesney, *147 Hobart Ave.	No reply	
Albert B. Collier, 177 Claremont Ave., Jersey City.	Draftsman	Tide Water Oil Co., Bayonne.
James Doyle, 36 E. 23rd St.	Draftsman	Standard Oil Co., Bayonne.
Benjamin Glover, *6 E. 33rd St.	No reply	
Benjamin Godshall, *7a Linden St.	Draftsman	Tide Water Oil Co., Bayonne.
Stanley Jasinski, 29 W. 29th St.	Machinist's Mate	U. S. Navy
Alex Karecky, *23 E. 16th St.	No reply	
J. Wallace Ogilvie, 321 Ave. C.	Pattern Maker	Downey Ship Building Corp., Staten Island.
Frank Peters, 32 Fulton Ave., Jersey City.	U. S. Army A. E. F., France	
Clarence Selover, *35 W. 41st St.	No reply	
John Silvay, 95 W. 32nd St.	Carpenter	Tide Water Oil Co., Bayonne.
James T. Slocum, 770 Ave. A.	Corporal	104 Field Signal Bat., 29th Div., A. E. F., France.
George A. Stewart, 89 W. 13th St.	U. S. Naval Reserve	
Howard R. Watson, 762 Broadway	11th M. G. B., 29th Div., A. E. F., France	

* Last known address.

CLASS OF 1915.

NAME	OCCUPATION	EMPLOYER
Gilbert Anderson, 88 W. 21st St.	Machinist	Am. Radiator Co., Bayonne.
Henry K. Colville, *29 W. 43rd St.	Electrician	U. S. Navy.
Philip Eley, 71 W. 29th St.	Stock Keeper	Tide Water Oil Co., Bayonne.
Walter Fletcher, 32 W. 51st St.	Electrician	U. S. Navy.
Charles P. Gochner, *94 W. 45th St.	No reply	
Frank Kovascy	Deceased	
Kasmir Krupinski, *405 Ave. E	No reply	
Leonard Lemal, 26 W. 26th St.	Electrician	Babcock & Wilcox Co., Bayonne.
Harry W. Morgan, 10 E. 45th St.	Draftsman	Wireless Improvement Co., New York City.
John Pabis, *197 Prospect Ave.	U. S. Merchant Marine	
Myer Piragowski, 41 E. 23rd St.	Machinist	Am. Radiator Co., Bayonne.
William Paul Pritchard, 39a Willow St.	Corporal	326th Tank Btn., A. E. F., France.
George Rayman, *38a W. 26th St.	No reply	Downey Ship Building Corp., Staten Island
Winfield Rinker, *157 Ave. C	No reply	
Benjamin Sweifach, 464 Ave. C	Machinist	Babcock & Wilcox Co., Bayonne.
Barney Zodkoy, 312 Ave. C	Boiler-Maker's Helper	Babcock & Wilcox Co., Bayonne.

* Last known address.

CLASS OF 1916.

Philip W. Brown, 942 Broadway	Ordnance Corps, U. S. Army	
John J. Cody, 26 W. 26th St.	Machinist	Amer. Radiator Co., Bayonne.
Morris Goldman, 383 Broadway	Machinist	Bethlehem Ship Bldg. Co., Elizabethport.
Edward T. Greenley, 119 W. 3rd St.	Student	Bayonne High School
Isadore Gershman, *83 W. 23rd St.	No reply	
John S. Kebbles	Deceased	
Jos. Kohansky, 10 E. 21st St.	Auto Mechanic	Isaac Kohansky, Bayonne.
Stanley J. Moculak, 7 Mechanic St.	Carpenter	

* Last known address.

CLASS OF 1917.

NAME	OCCUPATION	EMPLOYER
Myron Aslanian, 22 E. 29th St.	Electrician	Babcock & Wilcox Co., Bayonne.
Earl B. Dalrymple, 68 W. 6th St.	No reply	
Joseph Formanek, 468 Ave. E	Machinist	Am. Type Founders Co., Jersey City.,
Fred Haas, 36 W. 34th St.	Machinist	Babcock & Wilcox Co., , Bayonne.
Carl Haarup, 10 E. 24th St.	Box Maker	Waclark Wire Co., , Bayway.
Earl Haverty, 68 W. 6th St.	Electrician	Tide Water Oil Co., Bayonne.
Harold Hendra, 130 W. 44th St.	Electrician	Standard Oil Co.. Bayonne.
Felix F. Jozwick, 41 Prospect Ave.	Electrician	Tide Water Oil Co., Bayonne.
Alfred A. Macchi, 17 W. 31st St.	Machinist	Am. Radiator Co., Bayonne.
Anthony J. Mackiewicz, *41 E. 16th St.	No reply	
Stephen E. Martin, 86 W. 26th St.	Machinist	Babcock & Wilcox Co., Bayonne.
Stanley P. Michalski, 19 W. 20th St.	Seaman	U. S. Navy.
John Z. Modrowski, *54 Prospect Ave.	No reply	
John Muller, 929 Ave. C	Electrician	National Sulphur Co., Bayonne.
Casmer W. Pagurek, P. O. Box 65, Bayonne	No reply	
Joseph A. Peters, 33 W. 10th St.	Electrician	
James C. Pullaro, 82 W. 28th St.	Machinist	Am. Radiator Co., Bayonne
Julius D. Sleszynski, *85 E. 22nd St.	No reply	
Andrew Van Vlaandaren, 132 W. 50th St.	Machinist	U. S. Navy.
Fred Voss, 14 W. 31st St.	No reply	Babcock & Wilcox,
Joseph J. Zafian, *199 E. 22nd St.	Pattern Maker	Bayonne.

* Last known address.

CLASS OF 1918.

Stanley F. Borowsky, 68 Cottage St.	Chemist	Southern Cotton Oil Co., Bayonne.
Arthur J. Carlson, 65 W. 12th St.	Ship Fitter's Helper	Standard Ship Building Co., Shooters Island.
Bruno R. Czaplicky, *11 Andrew St.	No reply	
Percy Czudar, 99 North St.	Printer	
Abraham Goldman, 383 Broadway	Electrician	Tide Water Oil Co., Bayonne.
Wassil Jurechko, 175 Ave. F	Machinist	Babcock & Wilcox Co., Bayonne.

NAME	OCCUPATION	EMPLOYER
John J. Kellet, *69 W. 11th St.	No reply	
Emil G. Kmec, 107 Ave. F	Machinist	Tide Water Oil Co., Bayonne.
Alexander A. Linka, 17 E. 47th St.	Automobile Mechanic	Ed. Kunst, North Bergen.
Herbert M. Lundius, 134 W. 51st St.	Electrician	Stanley & Patterson, New York City.
James P. McLear, 251 Prospect Ave.	Printer	E. J. Hall, New York City.
Joseph Martinkowitz	No reply	
George M. Nemec, 333 Ave. E	Machinist	Babcock & Wilcox Co., Bayonne.
Oscar J. Olsen, 26 W. 35th St.	Machinist	Am. Type Founders Co., Jersey City.
Alex Panis, *97 W. 17th St.	No reply	
Andrew J. Preisendorfer *8 Sisson Court	No reply	
Harold C. Rossing, *65 W. 50th St.	No reply	
Vincent J. Stiller, 82 E. 26th St.	Machinist	Am. Type Founders Co., Jersey City.
Andrew J. Straka, 213 E. 22nd St.	Machinist	Standard Oil Co., Bayonne.
Isadore Wengeroff, *86 W. 18th St.	No reply	
Joseph A. Worosila, 81 E. 27th St.	Electrician	Bayonne Steel Casting Co.

* Last known address.

CLASS OF 1919

Course In Electric Wiring

Frank Jerome Bavolar
Henry Christopher Felstedt
John E. Haas
Edward Anthony Jozwick
Frank Roumald Matusiewicz
Henry Stephen Peploski
Howard Stanley Schaad
Donald Martin Taylor
Paul Alfred Wandlet

Course In Machine Shop Practice

Anthony Eugene Bonomo
Roy Axel Breitenbach
Lawrence Joseph Gadek
Joseph Frank Kubec
Alton Hugel Lundius
Meyer Pelowitz
Edward William Reuter
John Joseph Rushnac
Henry Theodore Staciva
Charles Joseph Tobey

Course in Woodworking

Andrew Dzamba
George Fred Houlroyd
John Henry Sacilowski

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